

mass of said amplitude control spindle and a connection element thereof is smaller than mass of said moving part and an element thereof.

REMARKS

Favorable reconsideration of this application, in light of the present amendments and following discussion, is respectfully requested.

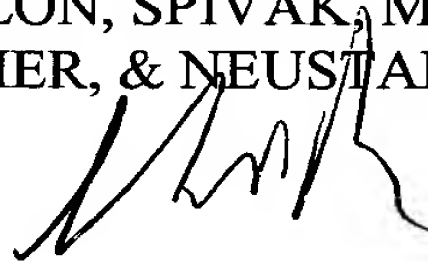
Claims 4, 6, 8, 11-14, and 17-20 are pending; Claims 4, 6 and 11 have been amended; and Claims 1, 2, 3, 5, 7, 9, 10, 11, 15, 16, 21, and 22 have been cancelled. It is respectfully submitted that no new matter has been added by this amendment.

In the outstanding Office Action, Claims 4, 6, 8, 11-14, and 17-20 were indicated as allowable. Because Claims 4, 6, and 11 have been placed in independent form by incorporating the limitations of Claims 1 and 2, it is respectfully submitted that these claims are in condition for allowance. Likewise, Claims 8, 12-14, and 17-20, which depend from Claims 4 and 6, are considered to be in condition for allowance.

Consequently, as no issues remain outstanding, it is respectfully submitted that this application is in condition for allowance. An early and favorable action is therefore respectfully requested.

Respectfully Submitted,

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IN THE CLAIMS

Please amend Claims 4, 6, and 11 as shown below:

4. (Amended): A linear oscillator comprising:

a moving part reciprocating;

a case containing incorporating said moving part; and

an amplitude control spindle supported in said case to be movable,

wherein said moving part and said amplitude control spindle reciprocate at a resonance frequency of said linear oscillator or a frequency in a vicinity thereof;

an electromagnetic driving part housed in said case, for reciprocating said moving part; and

a spring member disposed at least between said case and said moving part, and between said case and said amplitude control spindle, for forming a spring oscillation system, wherein a resonance frequency of said spring oscillation system is equal to a resonance frequency of said linear oscillator or a frequency in a vicinity thereof,

[The linear oscillator according to Claim 2, in which] wherein said spring member includes:

a first spring disposed between a fixed part comprised of said case and said electromagnetic driving part and said moving part;

a second spring disposed between said moving part and said amplitude control spindle; and

a third spring disposed between said amplitude control spindle and said fixed part.

6. (Amended) A linear oscillator comprising:  
a moving part reciprocating;  
a case containing incorporating said moving part; and  
an amplitude control spindle supported in said case to be movable,  
wherein said moving part and said amplitude control spindle reciprocate at a  
resonance frequency of said linear oscillator or a frequency in a vicinity thereof;  
an electromagnetic driving part housed in said case, for reciprocating said moving  
part; and  
a spring member disposed at least between said case and said moving part, and  
between said case and said amplitude control spindle, for forming a spring oscillation system,  
wherein a resonance frequency of said spring oscillation system is equal to a  
resonance frequency of said linear oscillator or a frequency in a vicinity thereof,  
wherein said electromagnetic driving part includes a coil to thereby use a coil current,  
thus enabling controlling a reciprocating motion,

[The linear oscillator according to Claim 5,] wherein said electromagnetic driving part includes:

a coil surrounding an outer periphery of said moving part;  
second yokes each disposed at each of both ends of said coil;  
a pair of permanent magnets which are each disposed on an end face of each of said second yokes and which are magnetized symmetrically with respect to a center of said coil;  
and  
first yokes provided on sides of said permanent magnets opposite to said second yokes respectively.

11. (Amended) A linear oscillator comprising:  
a moving part reciprocating;  
a case containing incorporating said moving part; and  
an amplitude control spindle supported in said case to be movable,  
wherein said moving part and said amplitude control spindle reciprocate at a  
resonance frequency of said linear oscillator or a frequency in a vicinity thereof;  
an electromagnetic driving part housed in said case, for reciprocating said moving  
part; and  
a spring member disposed at least between said case and said moving part, and  
between said case and said amplitude control spindle, for forming a spring oscillation system,  
wherein a resonance frequency of said spring oscillation system is equal to a  
resonance frequency of said linear oscillator or a frequency in a vicinity thereof,  
[The linear oscillator according to Claim 2,] wherein:  
said spring member is formed of a leaf spring; and  
mass of said amplitude control spindle and a connection element thereof is smaller  
than mass of said moving part and an element thereof.

Claims 1, 2, 3, 5, 7, 9, 10, 15, 16, 21, and 22 (canceled).